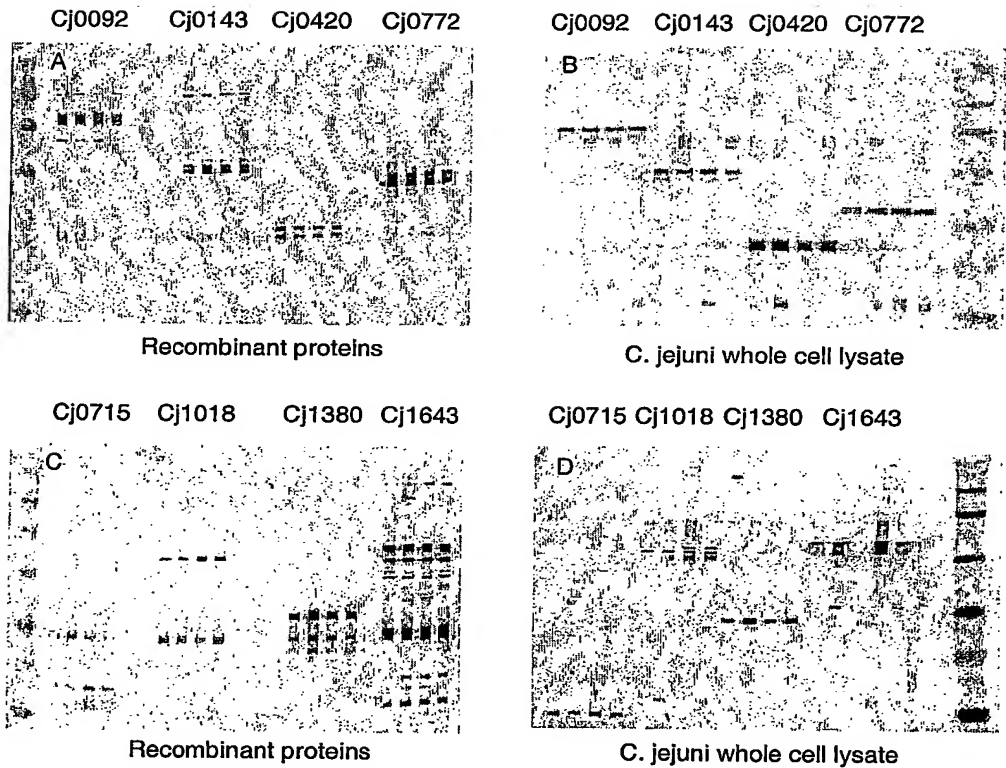
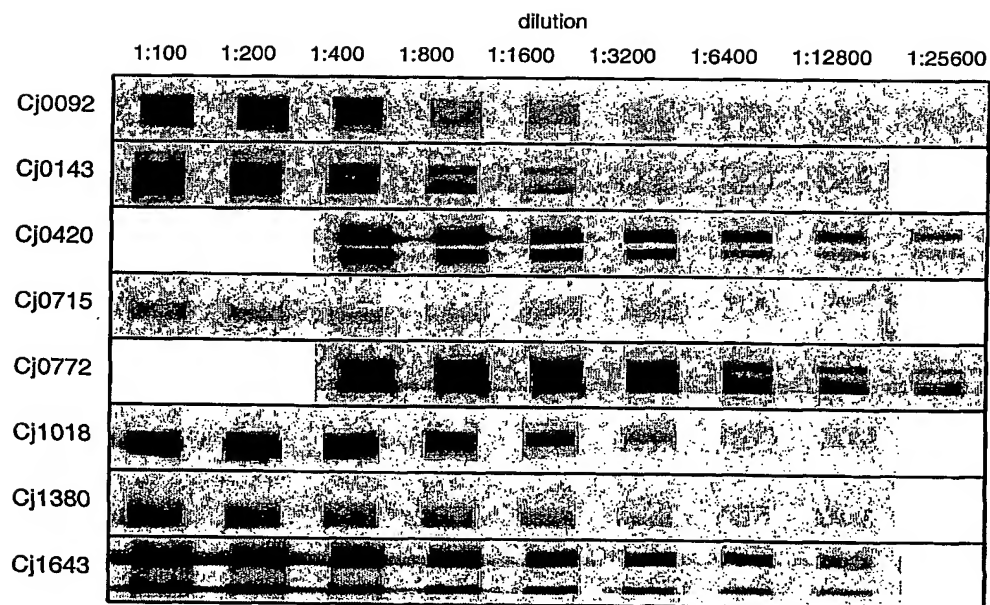


Fig. 1



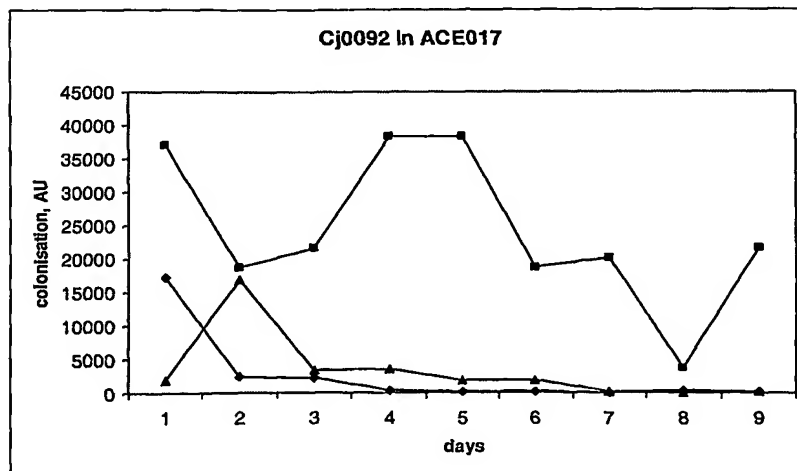
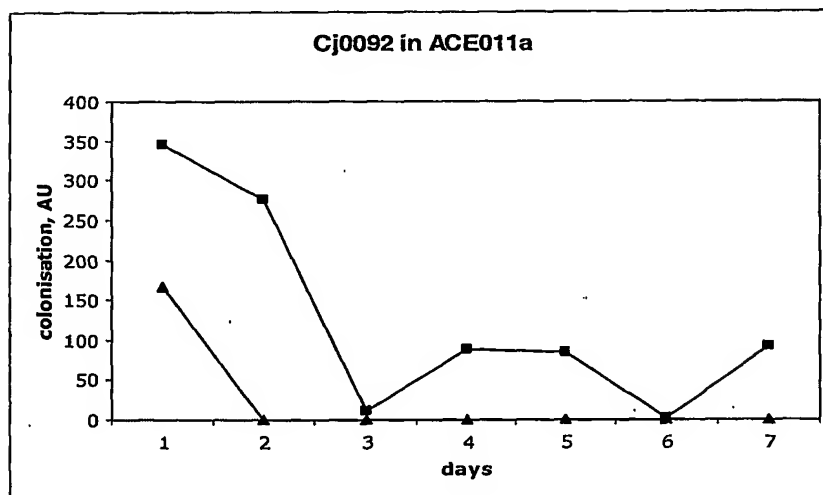
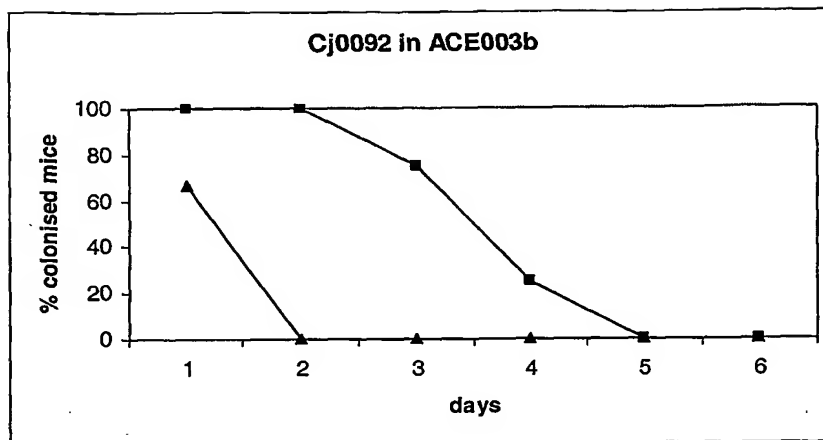
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Fig. 2



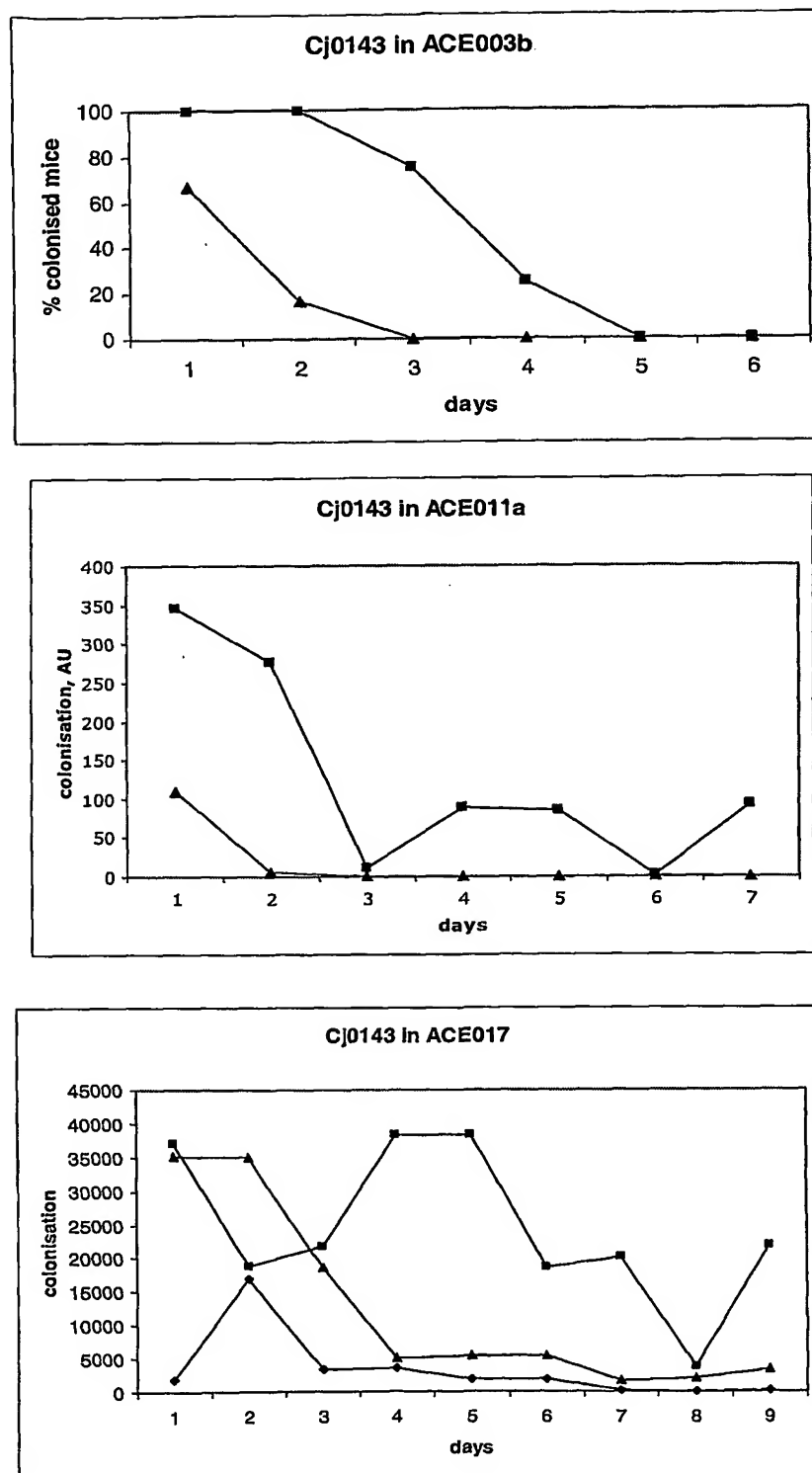
3/20

Fig. 3

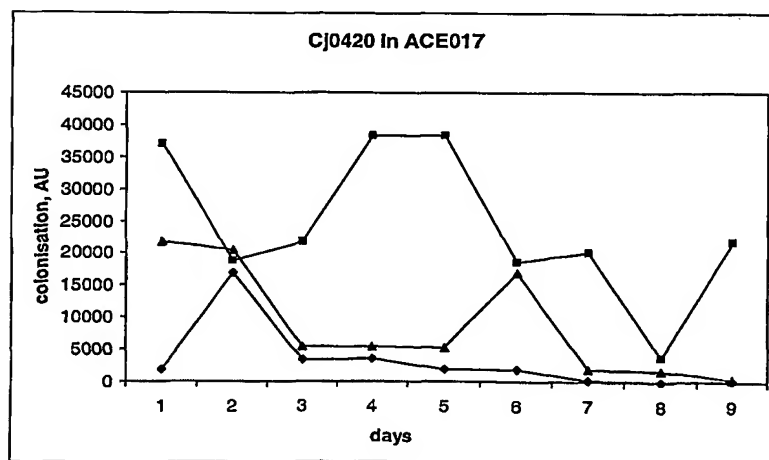
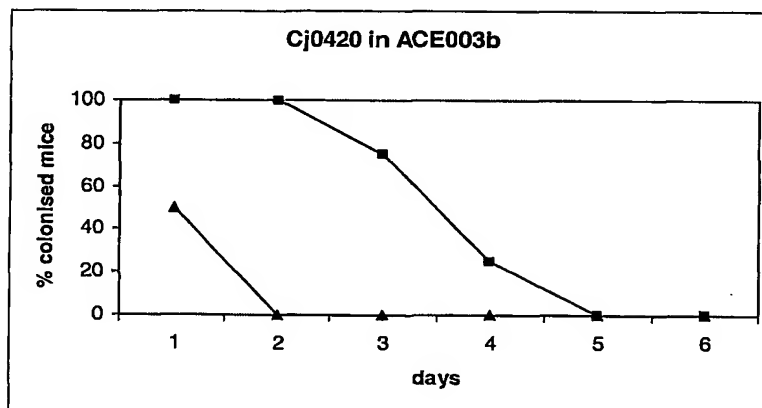
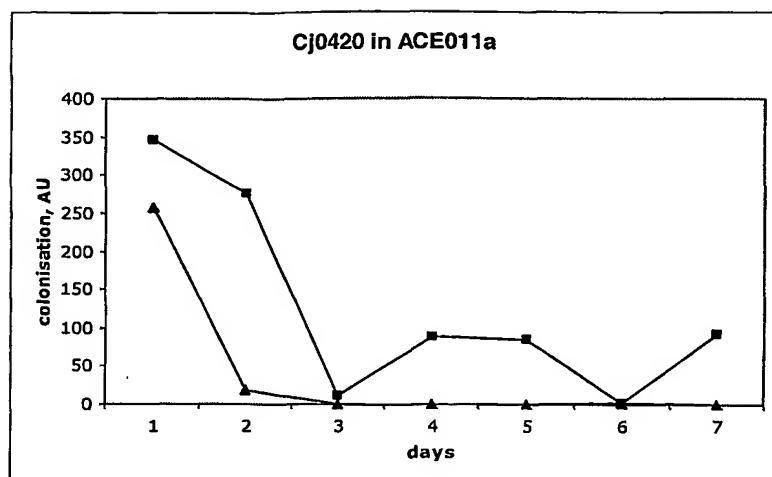


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Fig. 3

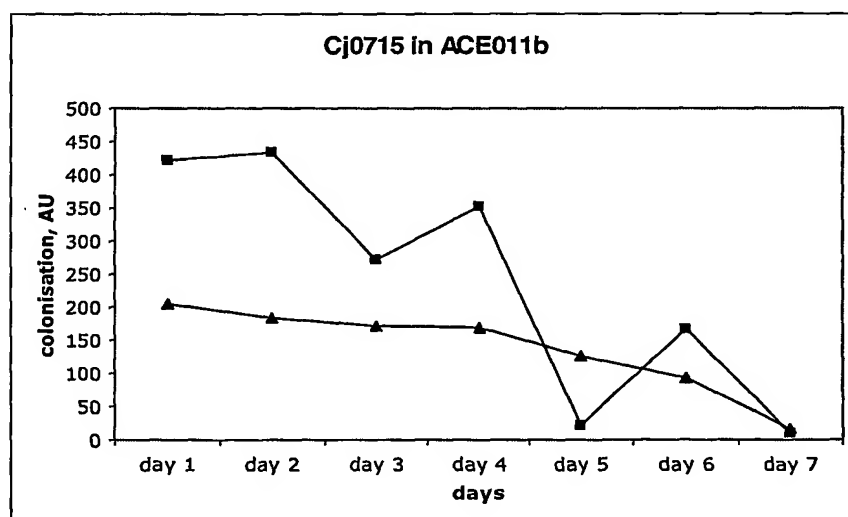
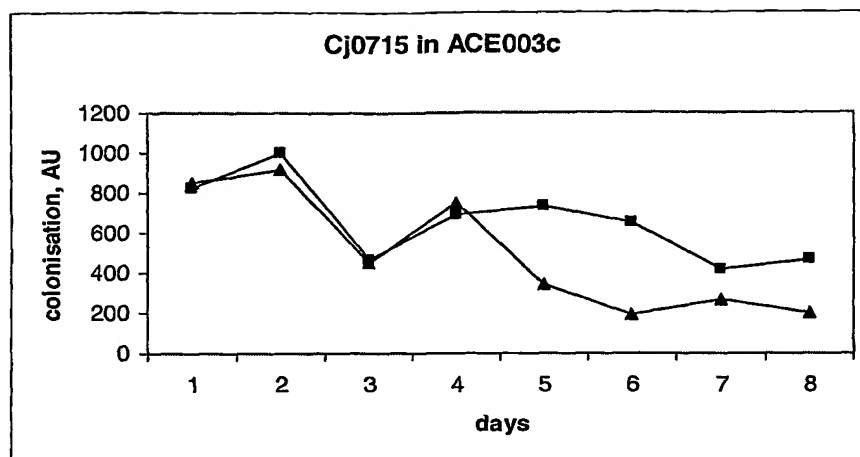


**Fig. 3** 5/20



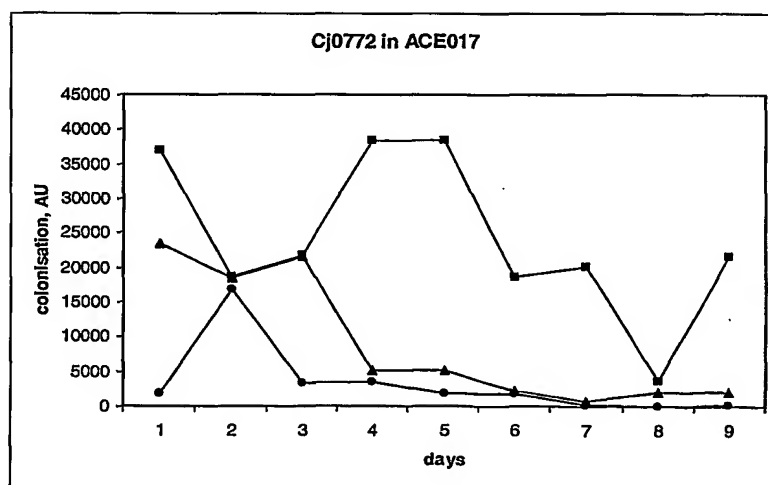
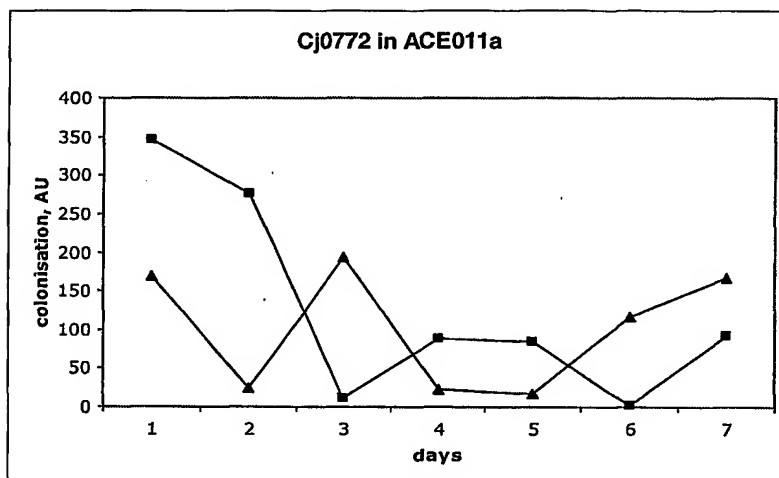
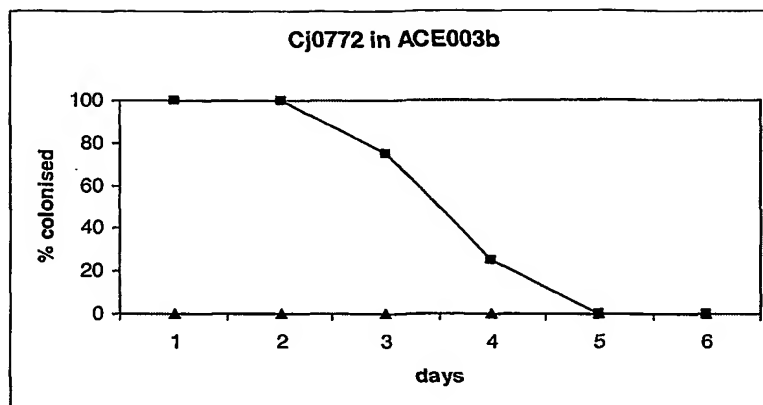
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Fig. 3



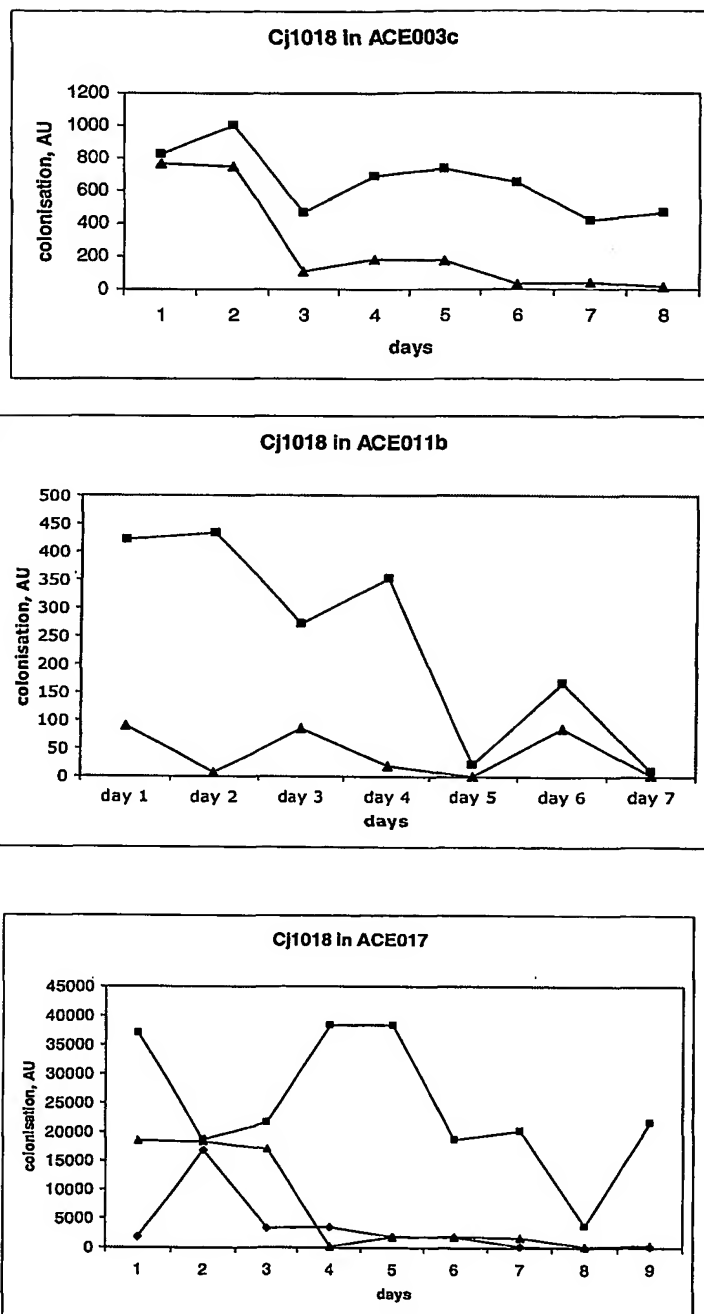
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Fig. 3



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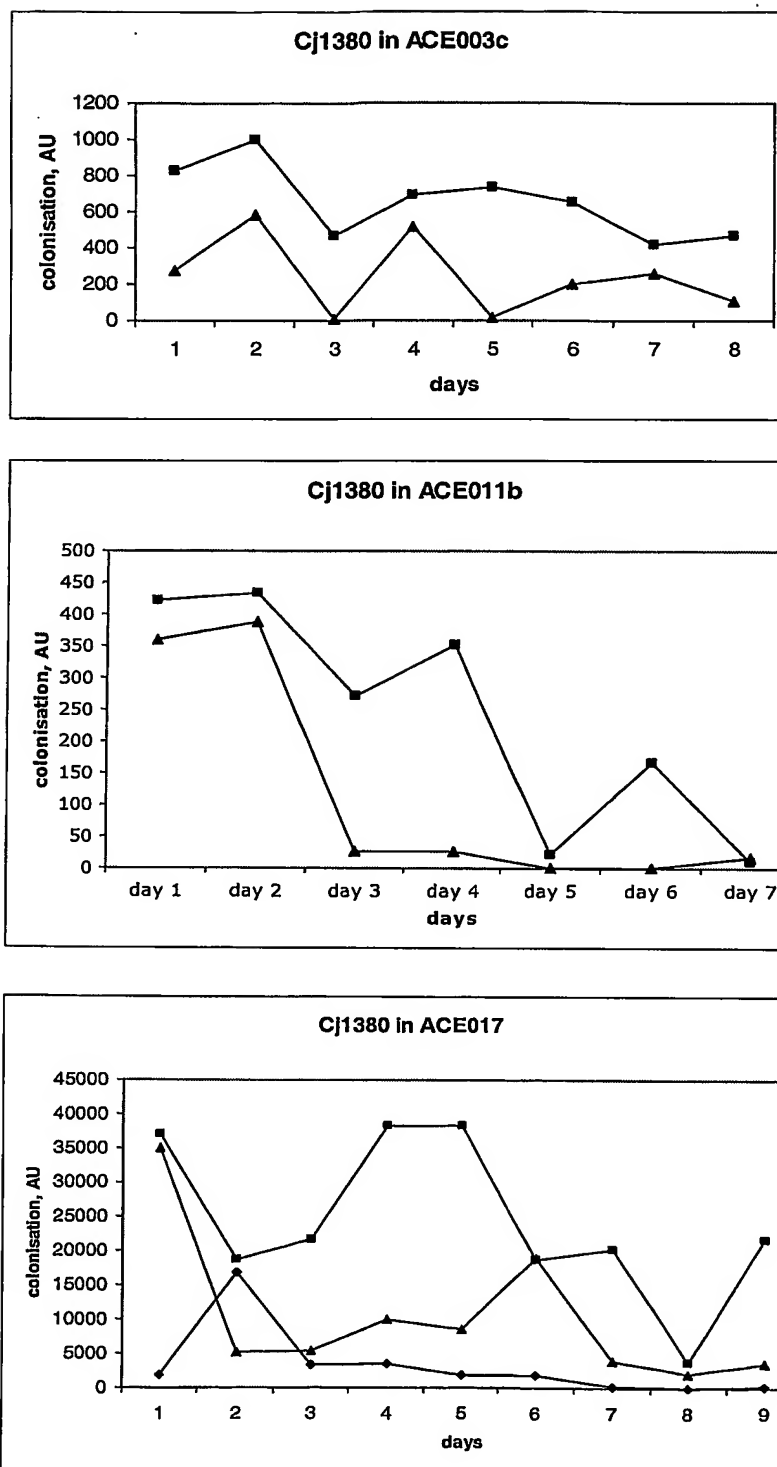
Fig. 3





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Fig. 3



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Fig. 3

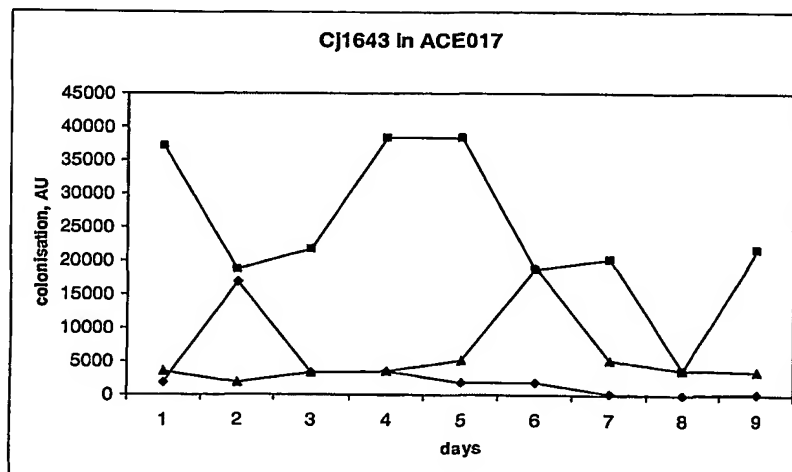
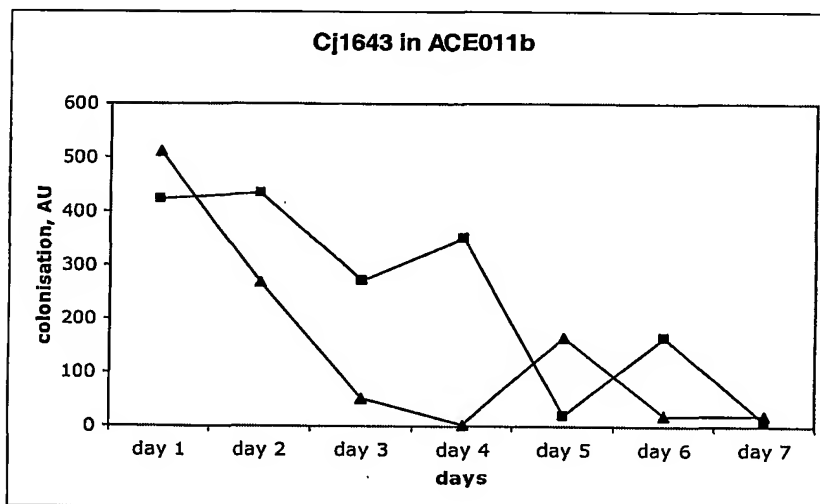
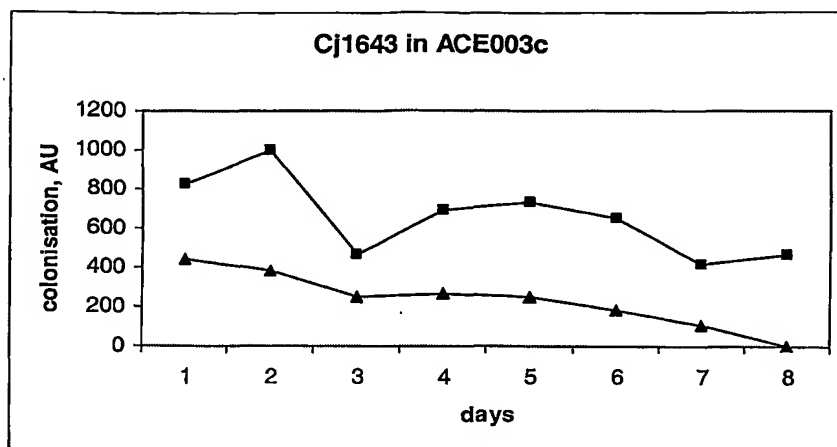


FIG. 4

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## Sequence listing

SEQ ID NO:1

ACE83 Cj0092

>AnrP630851 (NC\_002163) putative periplasmic protein [C. jejuni]  
MKKILFIGSLVMASLLYAQGSQPVEITQQDINTQNMESDASTKDITPKSIEDFFEEFADNFGIEYGITKD  
GKTFYTGKSTVAVNDTDPQFAQALQNAQKAMLNQSEFIRDAFGRIATSKIQNYEADNSTNAKEFDELP  
KGDKVDQILNKLTLQLAGAQLDKALKDLGIDTNSLSEDRKKTLLKQEFNLKMTMTNAIGSMSGLVPVQTIIVT  
QRRGEYDVGVVAVISNKTRQLAKDMALARQSAIKGKGKAISEYLPKDTKGFLNEYGIRLVYDENGAPIIL  
SYGNWGYVADPSNAKKTNILEDRAKETALTMADAAIIIEFINTNLSLKDERTTGDYEEIIKQTSINVDSS  
TQEQQTQNTIINIDKVNISKIKASASGKIRGIRTLKKWSYTSENGIEHVGAVERFYSENLANLTNEALNSKSN  
ATKNEAKKSSSIQRSSNVVNSMDDF

SEQ ID NO:2

ACE 5 Cj0005

>AnrP544820 (NC\_002163) putative molybdenum containing oxidoreductase  
[C.  
MKQNDQKENRRDFLKNIGLGLFGISVLSNFSFENFLGSKALAKELPDFKIEGKKDLIYHGEKPLTAETEI  
YALDSDFTKPENFFVRNNGLPSPLETIKERLHKGWTLIEDGESIINKKSYTIEDLKKKFKTYTYALTVECI  
GGNGRSEVIPSTKGTQWGYGAVACGRWTGVRLKDILKDCGIKNDAVYIGYYGIDTKLNGEETSPISRGVP  
ISKALQDETLIAWAYEGKDIPLVNGYPLRLVCGGYPASTSGKWLYKISVRNKIHDGEKMEGSYKVPVNPV  
KPGDFNYKEMKIIIESMPIRSVITNKNSEIKANKKFEVRGKAWAGELEVSEVYVSNNDYGVWTWTKAKVE  
KPLNRLAWQKWSAQISIPTKGYEIIWARAIDSQNSQPMVLAQWNPGGYINNACHRVNVYGV

SEQ ID NO:3

ACE 29 Cj0029

>AnrP372217 (NC\_002163) cytoplasmic L-asparaginase [C. jejuni]  
MKKAKSRIAILGTGTTIAGFIDSTIATTGYAAGAIIDIVLIKAVPQIRDLADISWEQIANIDSSNMCDIEI  
WLRLAKKIAKLFAEGIDGVVITHGTDTEETAYFLNLTIKSDKPVVLVGAMRPSTAIADGPKNLNVA  
LVVNKEAKNKGVMVAINDKILSARGVVKTHSLNVDASFSSPDFGDLGYIVDGKVFFYNNVVIKAHTKNAPFD  
VSKLTSLPKVDILYSYNDGSGVAALKALFEHGTGIVVAGSGAGSIHKNQKQDVLKELLKKGLKVVVSSRV  
VAGCVAVSDSDEKLGFI SAEDLNLPQKARVLLMLALTKTSDPKKIQEYFLKY

SEQ ID NO:4

ACE 37 Cj0037

>AnrP501075 (NC\_002163) putative cytochrome c [C. jejuni]  
MKKHILLGLCLSLSLSAKSVSDYKVGEELSDKEGVEYFKELSKRPVQEWPNKNLSINDVPKGKQGDILIR  
YGIELLSKTESTLGPYSKLKTSNEVNCSCHMDNDGNGLPGTKYVIPFLNINLNNYPRLDIETMKIISV  
EDRIRMGGTDSHRFPNDSEKEMKAILAYFKWLKEAYGIKDGVLKLEGGDFFAKMNFPNRPADPVRGKKLFE  
NCVACHGERGLGVKNDNYEQGSGHLYPSLLIYPDGGHMAMIPLARFLKSAMPFGASADNPILSDEDAID  
IAAVVNTGFMVMPITTTENRAGLDTAYSKSPSLKPEYFASPQQNLDPKEYIKVKYGPWKNPNHFPGE

SEQ ID NO:5

ACE 84 Cj0093

>AnrP666574 (NC\_002163) putative periplasmic protein [C. jejuni]  
MKIIKILFLGLFLSLSLNAKVITTTSTKSSTGEGTGLTREDAINNAIEAIGKMSGVSINSLKKSNTSVS  
TDNSGSNIQDNYSEQISKATKGRADTYEINSVEQDANGKYTANVTIFKTTTTTKKYQAPGLSADNRRSITV  
FDSTPDAAKRGIGSALQQKIISDLLQSRKFNVLD RDSSGYEMEKALIKSGDAASDEVYKLNMLATDYI  
LLFSISGLEGKQKTSNLTGKSKTEIEVIVDYRVLLFATRQIKFSNTLSMKVNLKDNSLSANETALKQIAN  
RIAGDILNAIYPLKVASVENNEVIFSQSLNQGDVYECFALGKVIKDTYTKENTGRVESKTSIEITRTSP  
KFSYAKITEGSKVGDICRPLSNTGSGNGYTIGRDANYQTQEGGGVNLGF

SEQ ID NO:6

ACE 98 Cj0107

>AnrP732169 (NC\_002163) ATP synthase F1 sector beta subunit [C. jejuni]  
MQGFISQVLGPVVDVDFNDYLPQINEAIVVNFSEGGKHKLVLEVAHLGDNRVRTIAMDMDGLVRLK  
AEALGAPISVPVGEKVLGRIFNVTGDLIDEGEEISFDKKWAIHRDPPAFEDQSTKSEIFETGIKVVDLLA  
PYAKGGKVGLEFGGAGVGKTVIIMELIHNVAFKHSGYSVFAGVGERTREGNDLYNEMKESNVLDKVALCYG  
QMNEPPGARNRIALTGLTMAEYFRDEMGLDVLMLFIDNIFRFSQSGSEMSALLGRIPSAVGYQPTLASEMG  
KFQERITSTKKSITSVQAVYVPADDLTDPAPATVFAHLDTTVLNRAIAEKGIYPAVDPLDSTSRMLDP  
NIIGEEHYKVARGVQSVLQKYKDLQDIIAILGMDELSEEDKLVERARKIEKFLSQPFFVFAEVFTGSPGK  
YISLEDTIAGFGKILEGKYDHLPENAFYVMVGNIDEAIAKADKLKG

FIG. 4

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SEQ ID NO:7

ACE 103 Cj0112

&gt;AnrP511634 (NC\_002163) periplasmic protein [C. jejuni]

MKKIVAIFLVFLGSLWAEDPVIDVNSGVVLPKIIIVKDNSNLSDENLKKSFYNIIVNDLKVSSNFEVVAN  
ATETSNYIFCYPTLNKNGNTLSLVKIKAGGSDKSEQTYTLNGLEQYYPFLAHKSVKASVNALGLAPVDWMD  
HKILIA RNSSSKKSQIIMADYTLTYQKVIVDGGNLNFPKWGNKEQTLFFYYTAYDHDKPTLYRYDLNTNKA  
SKILSSGGMVVASDVNVDGSKLLVTMAPKDQPDVLYDLNTKNLTQLTNYSGIDVNGNFIGSDDSKVVFV  
SDRLGYPNIFMQDLNSNSAEQVVFHGRNNSAVSTYKDFLVYSSREPQAGVFNIYLSINSIDYIRQLTAN  
GKNLFPFRSSDGGSI VFIKYLGAQSALGVIRVNANKTFYFPLRVGKIQSIDW

SEQ ID NO:8

ACE 134 Cj0143

&gt;AnrP57234 (NC\_002163) periplasmic solute binding protein for ABC transport system [C. jejuni]

MKKIILFILSLGIFYTFTQAKNLEQEQTSSNLVSVSIAPQAFFVKKIAANTLDVNVLPPNSNEHNFEF  
KPSTMKKLEKSDIYFTIGLEFEKVFDTKFKQNF PKLQVINMQKNIALIQTHDTHEHSHEHEHHEHGHFDP  
HTWLDPILVQTMALNIYDTLIQYQONENLYKENLDKFLAELDSLNLQIASKLEKLKNREFVVYHPSWTY  
FAKRYNL TQIPVEILGKEPKSKDLQKLITLMKDKNLKVI FVQNGFPENAAKTLAKECDAKIYKIDHLSYD  
WENELLKTADAFSHNL

SEQ ID NO:9

ACE 159 Cj0169

&gt;AnrP829849 (NC\_002163) superoxide dismutase (Fe) [C. jejuni]

MFELRKLPHYDTNAGDGLSAETFSYHHGKHNTYVTNLNLIKDTEFAGKDLVSIKTSNGGVFNNAQV  
YNHDFYFDCIKPSTGCGGSCQSIDANLQAALKEKEFGSLENFKAEFIKGATGVFGSGWFVLVYNTKNQK  
LEFVGTSNAATPITEDKVP LLVDVWEHAYYVDHRNARPAYLEKFPYAHINWEFVAKAYEWALKEGMGSVS  
FYANELHPVK

SEQ ID NO:10

ACE 183 Cj0193c

&gt;AnrP139712 (NC\_002163) trigger factor (peptidyl-prolyl cis /trans isomerase, chaperone) [C. jejuni]

MEVKAQQLDSVNATASVKIPSGMIKSEVENLAKKASKSVKMDGFRPGKVPVSAVLKRYERELTQDAEQNL  
FKSAVNSALQELKKENKELVGEPYFEKFDKRDGEIIAELILSFKPEIKLEGEYKLIPEYQTPKVSKEID  
EKKDELKRFKATPEAIKTKRALKEGDFAKFDFEGFVDDKAFEGGKAENYVLEIGSKQFIPGFEGMVG MK  
IGEEKDIKVTFPKEYGAHLAGKDAVFKVLHEIQELKIPELDDEMLKLLPGEEKASVEVLDEKLKEQI  
KNEKLFKLVDNDELKGFADALIEKYNF DL PKGIVEQETDMQMR AAFNTFSEKET EELKASKEKYQEK RDS  
FKEEAQKSVKLTFIIDELAKLRKIEVNDQELIQAIYFEAYRYGMNPKEHLENYKQKQALPAVKMALIEEK  
LFNDIFIPKTEKSEKVSKEKEDK

SEQ ID NO:11

ACE 259 Cj0285c

&gt;AnrP467527 (NC\_002163) chemotaxis protein [C. jejuni]

MFDENIVKTGSNEMELVDFRIFKQGHDKVYEGIYGVNVSKVREIIKIPSLTELPVDPDYIEGIFDLRGVV  
IPVNLAKWMQITEPESTMLKPRVIITEFSNIIIGFIVHEAKRIRINWKDIEPATFSTGSGALDKGKIT  
GVTRIENDEVL LILDLESVVEDLGIYAPKTDIDFGKIEKFTGTALILDDSM TARKRVKEMMQMGFQVVE  
AKDGVGEGINKLEELSQIYGESLNDTLKIIIVSDVEMPQMDGFHFAARIKEDPRFKDIPIVFNSSLSNEFMN  
EKG VQEAGGEGYL VKFNASDFFNEIAKVIKKHQSQEQG

SEQ ID NO:12

ACE 332 Cj0358

&gt;AnrP681041 (NC\_002163) putative cytochrome C551 peroxidase [C. jejuni]

MKVKSLLIASLVAFSSLNAA SLIDEAKNSGLVALPKDQKGVDEILKQNGVKASEFTLEKAELGKKLYFEP  
RLSKSGIISCN TCHNVGLGTDGISTAI GHKWTANPHHLNSPTVYNAV LNNTQFWDGRAGTLADQAKGPI  
QADPEMATPAKLAVEKISSLPEYVSEFKKIYKSGVNFNDIADAIANFERTLITPSRFDKFLGDEKALT  
KEEQKGLKLFIDKGCVACHNGVNLGGNMQAFEVAGKYKFANLGDFKGDANGMVKTPTLRNVAETAPYFHN  
GAIWN LKDAIKEMGSVQLGIKISDKEAKSIETFLKSLTGT KPAIVYPQLPISTEKTPKPEL

SEQ ID NO:13

ACE 419 Cj0448c

&gt;AnrP569688 (NC\_002163) putative MCP-type signal transduction protein [C. jejuni]

MFGSKINHSD LQKLEENKNLTHKIEKFQSENLELKNKITSLEQAALSKLKTDLNVL LTGVLKNITII  
QGDML ENVNKAEVISSYSKTS LAEMDELNHIAN SINASLGNITESANKTRDVAGTLHRSVDEITNVINLI  
KDVS DQTNLLALNAAIEAARAGEHGRGFAVVADEVKRLAEKTKQATTEVEMNINLLKQANANEMYTQSEQV  
EKISIDSN AHIMSFSEKFTHLVNEAHSTNSNAVG IASEAFVSLAKLDHIAFKLNGYKEIFSKSGKQLADH  
TSCRLGKWLASTGKERFGQNK SFLKINEPHEKVHENMNAIT IANTEDISKDITQHSIINKCEVAENASL

## FIG. 4

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DLFNVFKEMLDESDH

SEQ ID NO:14

ACE 420 Cj0449c

>AnrP852550 (NC\_002163) hypothetical protein Cj0449c [C. jejuni]  
MLHEYRELMSELKKGDAHFDFKLFDRHNELDMMIKDAEEGRSLSSMEISTLKKEKLHVKDELSQYLANYK  
K

SEQ ID NO:15

ACE 481 Cj0511

>AnrP255677 (NC\_002163) putative secreted protease [C. jejuni]  
MMELILKTKRFFAGLAGFATTFILCLFLTSHLQAKVDQKEEQVQKRLEALDKLTKTLAIVEQYYVDDQNI  
SDLVDKSLSGLLSNLDAHSSFLNEKDFNDMKIQTNGEFGGLGITVGMKDGALTTVVSPIEGTPADKAGIKS  
GDIIILKINDEATLGINLNDVDMRGKPKTQITLTIFRKGATKPFDDVTLTREIIESVYAKMIENENIL  
YLRVTNFDKNVVDVASKELKKYPNVKGVILDLRNNPGGLLNQAIGLVNLFVDKGVIVSQKGRIASENQEY  
KADPKNKISNASLVVLVNGGSASASEIVSGALQDLKRGVIVGENTFGKGSVQQIIPINKTEALRLTIARY  
YLPSGRTIQAVGVKPDIEVFPKGVNTQEDGFSIKESDLKQHLESELEKIDKNKKEDKQENKDNKNLISQK  
QINDDAQLSAIDTIKILNIKQGG

SEQ ID NO:16

ACE 528 Cj0559

>AnrP252410 (NC\_002163) oxidoreductase [C. jejuni]  
MKKIDLIVGAGPTGIGCAVEAKLKNKEVLILEKSNNICQTLMQFYKDGKRVDAKAYKGCEGTNHGHVPFEE  
DGTKESTIETFFQNALKEHNIEVEFGSEVESVKNENGVLVSTAKGVYECKNIIVAIGRMGKPNKPDYKLP  
MTLTKIINFNANSVLGNEKILVVGGSNSAAEYAVDLANSNQVSLCYRKKEFTRLNDINLKDIEAGNSGK  
VELKLIDINEVEDDNGKAKVNFTDGTSDIYDRIIYAIGGSTPLDFLQKCGINVDKGVPLMDENKQSNV  
KGIFVAGDIATKNGASIVTGLNDAVKILSVL

SEQ ID NO:17

ACE 582 Cj0613

>AnrP916533 (NC\_002163) possible periplasmic phosphate binding protein  
[C. jejuni]  
MKKILSLSVTSLALCGALNAVDLKIAGSSTVYPFTSFVAEEYASIKNTKTPIVESLGTGGGFKVFCEGTT  
DISNASRPMKLSEFETCKKAGVTDIVGMMIGYDVGIVLAQNKTNAPLNITKKELFLALAKEIPQNGKLIPN  
PYTNWNQINKNLNPNRKISVYGPPSSSGTRDTIEELVMSDVSKKIPEYKGEYKTIRQDGAYIPSGENDNLI  
VSKLTIDKDAFGIFGYSFVLSNSDKINAANIDGVTPEESIADKEYELARSLFIYINAKKNPKEAFDFAK  
IYMSDDLAKSGGELEKIGLVPLSDDKLKASQKHVEDRKILNDELVKAGKVF

SEQ ID NO:18

ACE 605 Cj0636

>AnrP126795 (NC\_002163) NOL1\NOP2\sun family protein [C. jejuni]  
MQNILSSFAQEKNVCFANTLKTSIEELEKEFLKQNLKFKKINVYCYLFDKADKAILSSMKAFNEAHFYI  
QNYSSYLCLNLEVKAGQSVLDMCAAPGGKSINLANFMQNTGYLACNEMSRDRFFILQKNLKNYGVNAKV  
FMKDGNIGNLCPKFKDKILLDAPCSTFAKIGFDLEKSYKEIKNIAKTQKKLLHSALKALKIGGELVYST  
CTPTKEENEVEIENALKSEFKLELLDIDLENVEAKAGQSEEFABEISKRRILPSLDYDGGFFIAKLRLKC

SEQ ID NO:19

ACE 667 Cj0706

>AnrP327756 (NC\_002163) hypothetical protein Cj0706 [C. jejuni]  
MNKYLEQLVLLSKIDQEIDSYPKIDSINKTLKDAELKIEKINADLEKIDEEIKDIENQKIQNNAHISEF  
SAKIKDLKKSGVVKTEKEANALKIEEDIAKEQLDAANDEIVRLDKILENKETYKKELEEEKIKQEQNIN  
EIRVSIKSEMEVLEKDRMSVYDKTKLVSEMNQKVL SFYEKIRKWKAKNTAVVPVKKQACYGCFMKIYDKT  
YLSVVKGEEIVTCHPCGRILYKEQEEQN

SEQ ID NO:20

ACE 676 Cj0715

>AnrP684299 (NC\_002163) transthyretin-like periplasmic protein  
[C. jejuni]  
MFSIKKTLILASVPMFLSATEYQLSTHVLDITSGQPAPKVVELYKLEANQQWKKVSEEFTEENGRIGD  
LLPYEKAENRAFGIYKLFKFTKDYTSHKINTFYPFVEVSFELSKDQKHYPITLSPFGYSTYRGS

SEQ ID NO:21

ACE 731 Cj0779

>AnrP191193 (NC\_002163) probable thiol peroxidase [C. jejuni]  
MSIVNFKGNPVKLKGNVSEVGADAPKVNKAKDLSVIEIGAAGKTQIILSVPSLDTPVCATEAREFNKKV  
ASYNGAEVIVVSMDDLFPAMGRFCSTEGIENLSVASDFVAKEFGKEYGVLINEGALEGLLARAVFVIKEGK  
VAYKELVNEITEMPDIAKLDAFFGGSSCCGGCGCH

## FIG. 4

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SEQ ID NO:22

ACE 853 Cj0909

>AnrP318705 (NC\_002163) putative periplasmic protein [C. jejuni]  
MKKILLGLGALFVNLWAVNDIEVKNAFVKQTPPHAQNSAIFLTIFNNTNKKDIALISAKSDISEVSELHHTH  
IHKDGKMMMQKIPEIIKAHSSTELKSGGYHIMLLKLLKPKPIKDKTKVNLDLKFNNHKTIELKNIDSKEF

SEQ ID NO:23

ACE 937 Cj0994c

>AnrP493933 (NC\_002163) ornithine carbamoyltransferase [C. jejuni]  
MKHFLTLRDFSKEEILSLVNHASELKKKEPKLLQDKTLAMIFEKNSTRTRMAFELAITELGGKALFLSSN  
DLQLSRGEPVKDRTARVIGAMVDFVMMRVNKHETLLEFARYSKAPVINALSELYHPTQVLGDLFTIKEWNK  
MQNGIAKVAFIGDSNNMCNSWLITAAILGFEISIAMPKNYKISPEIWEFAMKQALISGAKISLGYDKFEA  
LKDKDVVITDVTWVSMGEENEKERKIKEFEFGMIDEKAMSVANKDAILLHCLPAYRGYEVSEEIFEKHADV  
IFEEARNRLYVVKALLCFLDNQGRG

SEQ ID NO:24

ACE 941 Cj0998c

>AnrP979073 (NC\_002163) putative periplasmic protein [C. jejuni]  
MKKILVSVLSSCLLASALSAVSFKEDSLKISFEGYKTKDMIGTKGEFKNVEYKFSKNIKDLASYLKGAKA  
TIKPSNAFMGEGNDIITNNITKVFFPALLGDTDIKVVFQDVIAGENKGVISAKITMDKKSTIVPLTYTIK  
DNKFEAKGQLDLHTFKNGSKALKALSDVAAGHGGISWPLVDISFNADLAE

SEQ ID NO:25

ACE 961 Cj1018c

>AnrP257863 (NC\_002163) branched-chain amino-acid ABC transport  
system periplasmic binding protein [C. jejuni]  
MKKSLILASILSLSLSAAEVKIGVVLPLSGATAAYGQSALEGIKLANSMQSALSNGDKVSLAIDITKGDK  
LESSSGANRLVSQDKVIGLIGEMVTANTLQVMRVAEDNKIPLIAPAATGDRLLDKKIYSSRVCFMDSFQG  
SSLAKYVFSKLNYSKSAVIVVDQSTDYSLGLAKAFKQYKSNGGQILRLRVNSGDKDFRAIVAQVKSLNP  
EFIFLPLYSEASLFARQSKLAGLNI PMGSADGVADQTFISLAGDASEGYIFTDSFDANNPTTKLSKEFI  
SVYEKAKGKTKEVPNFSAMGADAYFVMLNAMNACVENLTSKCVNEKIHQTKNYQGVSGVISIDQGTGNATRS  
VVVKEIKNQKQNYKDIINP

SEQ ID NO:26

ACE 962 Cj1019c

>AnrP326257 (NC\_002163) branched-chain amino-acid ABC transport  
system periplasmic binding protein [C. jejuni]  
MKKLTTLTSLVLTVMNCLYAKDINIGVVLPLTGTVAAYGQDVFNGLIELANKLQPKLSNGDVIKLITIDTKG  
DKLETSGNVNRLIATDKVLGIIGEATTPNTIQAISIAEKKIPLIAPVASGDKLLDKKYASRVCFKDSF  
QGDKFATYVSKDLGLKNAVIIIDQSNVYSLGLARAFENSFKNNGGKIIKKLVINSNGDKDFRAVVSQKSL  
NPDFVYMPIYHPEAALIRARQIGFDKLLVAGDGVNNQTFIDLGGSANVGVIFTDSDYNPSTQLGKD  
FVAAYEKVKGTKELPAPFSAMGADAYFVMLNAMNACVDNLSSECINSKIHQTKDFQAVGGVISIDESGNAI  
RSVVIKEIQNQKQNYKTIINP

SEQ ID NO:27

ACE 984 Cj1041c

>AnrP198268 (NC\_002163) putative periplasmic ATP/GTP-binding protein  
[C. jejuni]  
MKKYVLSLALLGSLGASELKYQEFDFGKSPESIFVDKNYVYVSNVGEKLEPLAKDNDGFISKLDKNGKV  
LEYKFLTHLNLAPKGMMEIGKTLVVDIDVLRGFDLKTKEIFNLPIKGAIFLNDIEKLDDNTLLVSDTGT  
GLILKVDLKTQYDELLKLDLAKFGGPNGLYLDRKKHKLFIAGYHPDGVSGGVVMAYDLNTKELSIKNE  
KESYDGVIPYKDGLLVSSWGNLNGYIYNLDNVKSVKLELPLMKGPADIFIEGNILWIPKMVEGKIFKVE  
LNK

SEQ ID NO:28

ACE 1094 Cj1153

>AnrP385049 (NC\_002163) putative periplasmic cytochrome C [C. jejuni]  
MKKLLVVSALACLGVSFAADGATLFKKCAVCHGANADKVYLNKVPALKTLSSAERLQYMKEYSEGKRNA  
YGQGAIMKLLNLKGLTEEDFKAIEAHITLTK

SEQ ID NO:29

ACE 1155 Cj1214c

>AnrP470247 (NC\_002163) hypothetical protein Cj1214c [C. jejuni]  
MFKTIVCFLALNLSLFAVGFDLKPIKSELVKVDDIYGVIKDSDDIKLYSSGVVVQHFSNSQSIIARASVI  
DKKNGLAKLEFSVFSALKQDALPLPNVLPKVGDEVVLNFLYDRGLVIAPDEQTYNELVREFPQIYFTHID  
IFGAQLIRATLSPKRSDFRQFCDDNAVIGILVVALENHAEVVDQDFNKLYEVPIISKPTSVQVPFYSRIG  
GYKSNFFDFNSQEIGNYYRYDALINLPKVQ

FIG. 4

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SEQ ID NO:30

ACE 1227 Cj1287c

&gt;AnrP530915 (NC\_002163) malate oxidoreductase [C. jejuni]

MNLKEEALKYHLGGKIDIVPSKPMATSYDL SLAYSPGVAEPCLEIAKDNELAYTYTNKANLVAIVSDGSA  
VLGLGNIGAQAQSKPVMGKACLFKKFANVNAYDIEINVHSIEEIVNFCKALAPT VGGINLEDIAAPKCFE  
IEAALQDLGIPVMHDDQHGTAIISTAGLMNAMEISGKKFKDIKVVVSGAGAAGIASAKMYRNLGVENIIL  
VDSKGVISKDRNDLTPQKLEFAVDSKEKTLKEVLKGADVFLGLSAPKILDDDEMVL SMAKDPVIFALANPI  
PEVMPEDVARLRKDAIVGTGRSDYPNQINNVLGFPFIFRGALDVRASKITENMKVAAAKALADLAKLPVS  
DAVKKAYNLSLTFEGRDYPVIPPFDERVKAAVSTAVAAA VKGDVAKVKNFDEKAYFESLK

SEQ ID NO:31

ACE 1320 Cj1380

&gt;AnrP108083 (NC\_002163) putative periplasmic protein [C. jejuni]

MKKLSLILVCSASLFAASNSEISDFYSKSIKAQFPNATVSVSNRQKVGNTGFESVIVSVELNGQKQENIL  
FTKDSLITPDILDLKTGISYAQYEMKKFQEARENFTKNAKAVAQKETMVI ALGDKNKPAIYVFS DPECP  
YCREHLAQIDDELKNYQVNYILTPVHGKSAFEKSALIYKEAKKAKNDKEKIAILNKYYDANIKNYPKVSD  
AELKEVFSLEYKYSLSLGSATPTTIK

SEQ ID NO:32

ACE 1431 Cj1496c

&gt;AnrP947055 (NC\_002163) putative periplasmic protein [C. jejuni]

MIKKFILLVFISSVVFAGQDCEQYFEARKAQIELQTRFDEARQSLEAYKASFEALQKERLENLEKKEA  
EVNATLAKIEELKLENARLVEEQQKILNSINDKTQGRVKEIYSQMKDAAIADVLSQMDAEDASKIMLSLE  
SRKISGVL SKMDPKKASELTLLLNLDNNAS

SEQ ID NO:33

ACE 1449 Cj1516

&gt;AnrP407504 (NC\_002163) putative periplasmic oxidoreductase [C. jejuni]

MNRRNFLKFNALTLASMGVAYANPMHDMHSMHKNHSINHDLDTSFINFAPKNLKLDPKQFPQGEILKAL  
PLLKNESKEKNIFRATLEIKENHIELIKGKKTLYFYTYNGLVPAPKIEVFEGDKLEILVKNKLKEATTIHW  
HGVPVPDQDQSPHPDILAGEERIYRFEIPQDSAGTYWYHPHYTASKQVFMGLAGAFVIKAKKDALSH  
LKEKDLMISDLRLDENAQIPNNLNDWLNGREGEFVLINGQFKPKIKLATNERIRIYNATAARYLNLRIQ  
GAKFILVGTDDGLIEKAIYKEELFLSPASRVEVLIDAPKDG NFKLESAYYDRDKMMVKEESNTLFLANIN  
LKKELKELPKNLKIFKPLEEPKEFKEIIMSEDHMQMHGMMGKSENLKIALASMF LINGKSYDLKRIDLS  
SKLGVVEDWIVINKSHMDHPFHIGTQFELISSKLNGKVQKAEFRAFRD TINVRPNEELRLKMKQDFKGL  
RMVHCHILEHEDLGMMGNLEVKE

SEQ ID NO:34

ACE 1469 Cj1540

&gt;AnrP818860 (NC\_002163) putative periplasmic protein [C. jejuni]

MKKIISLALALALSASAAELKMATTTSTDNTGLLDALKPLYEKESGNTLKWVAVGTGAALKMGEDCNADV  
LFVHSPKAEKEFMKKGFGVDRTPVMYNDFII IADKSLASKFKGNL KESLELIKNEKLT FISRGDKSGTD  
NKEKSLWKNLGGVPEKQSWYQQSGQMLASIKIAEKKGVILTDRGTIYIKYEANEKGKPNLVIVNEGDDS  
LKNFYSVIATNPKHKCNVNYTEASKFIKWVTS DKTLNFIADFKLLNKPLFVIDAKTRKD

SEQ ID NO:35

ACE 1584 Cj1659

&gt;AnrP294550 (NC\_002163) periplasmic protein p19 [C. jejuni]

MIKKVLSVVA AA VISTNLFAGEVPIGDPKELNGMEIAAVYLQPIEMEPRGIDL AASLADIHLEAD IHAL  
KNNPNGFPEGFWMPYLTIAYELKN TDTGAIKRGTLMPVADDGPHYGANIAMEKDKKGGFGVGN YELTFY  
ISNPEKQGFGRHVDEETGVGKWFEPPKV DYKFYKTGTPK

SEQ ID NO:36

ACE 1569 Cj1643

&gt;AnrP407676 (NC\_002163) putative periplasmic protein [C. jejuni]

MKKILIIICMLF TLSFGIERPKFEDFLAGYERNKASMLN YEGMPAFALSENLLAVLKQPN AKLNKYVKYDP  
FLNLVYLVRTDFSLIPTPMGDEEKLTRNDWVG IWDPNKPYIGHIKYLAQNI DEKDQLDFNSKIGLLGTPCC  
EMMGIALNNSFINKRYLKHFMKYNDVYWGDI GVDVVRNKIYVNNVRKNPQFLINDQVISVDGLPAND  
LRKLNEKILFADRGSTLYFQVLRDNMDLNISTEVFAKDL SKFNLPDSKPKPKITNFTSNLGLTVNASLVV  
TKIDPKSKVSNAGFMVGDKILRVNNIILNNFKELQNILSAGNDFSILIERKSTKLPLSNFN NELGGNANS  
GGDGKFQFFIRLTK

SEQ ID NO:37

ACE 96 Cj0105

&gt;AnrP758295 (NC\_002163) ATP synthase F1 sector alpha subunit [C. jejuni]

MKFKADEISSIIKERIENFDLNL EIEETGKIIISVADGVAKVYGLKNIMAGEMVEFENGDKGMALNLEESS  
VGIVILGKGEGLEKSGASVRLKLLKVPVGEALIGRVNALGEPIDAKGVINANEYRFVEEKAGGIMARK

FIG. 4

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SVHEPLHTGIKALDALVPIGRGQRELIIGDRQTGKTTVAVDTIISQRGQGVICIYVAIGQKQSTVAQVVK  
RLEEKGAMEYTTIVNAGASDPAALQYLAPYTGVTMGEFFRDNAKHALIVYDDLKSHAVAYREMSLILRRP  
PGREAYPGDVLYLHSLRLERASKLNDELGAGSLTALPIIETQAGDVSAIYPTNVISITDGOIFLETDLFN  
SGIRPAINVGLSVSRVGGAAQIKATKQVSGTLRLDLAQYRELQAFQAQFASDLDEASRKQLERGQRMVELL  
KQPPYSPLSVEKQVVLIFAGTKGFLDDIAVSRIKEFEDEGIYYPFIEAKHPDIFEQIRSKKALDSDLEEKLA  
KAINEFKANHL

SEQ ID NO:38

ACE 165 Cj0175

>AnrP550554 (NC\_002163) putative iron-uptake ABC transport system  
periplasmic iron

MKKIFFMFLTAVSFLGASELNIYSARHYNADFEIIKKFEEKTGKVNHTQAKASELIKRLSLEGSNSPAD  
IFITADISNLTEAKNLGLLSPVSSKYLEEFIPAHLRDKDKKEWFATTKRARIIAYNKNTNIDISKMKNYED  
LAKAEFKGEIVMRSATAPYSKTLASIIANDGNKEAKAWAGVLENLATNPKGGDRDQARQVFAGEAKFA  
VMNTYYIGLLKNSKNPKDVEVGNLSGIIFFNQDNRGTHINISGIAMTKSSKNQDAAKKFMEFMLSPEIQK  
ILTDSNYEFPPIRNDVELSQTVKDFGTFKEDQIPVSKIAENIKEAVKIYDEVGFR

SEQ ID NO:39

ACE 257 Cj0283c

>AnrP602342 (NC\_002163) chemotaxis protein [C. jejuni]

MSNEKLEQILQKQQTQMGAPDQDQREDDIIQLVGVFVVGDEEYAIPLNIQEIIEIKPIEYTRVPSVPDYVLG  
VFNMGRGNMPLIDLQARFHLGSSKMTPTQTRYIVLRGETNGTGVGGNAGFVIDRLTEAIKIHNRNIDPPPE  
TLVKDKGMIYGIGKRDENILTILKVEALLKREF

SEQ ID NO:40

ACE 277 Cj0303c

>AnrP311344 (NC\_002163) putative molybdate-binding lipoprotein  
[C. jejuni]

MKKFVVFVFGILLFVSCNLAQNLSIFVASSASKAMSEVKDEFLKTHPEDKIELVFGASGKYVELLKQGREF  
DLFFSADTKYAKAIYDDKNALIKPKVYVLGVLALYSLDENLQGGVENLKEKANKITHLSIANPKVAPYG  
VAAKEVLENLGLNELLLKDKIVLGENISVPVLHVDKSNSDIAIVAYSLVSSINHPKGAVIDAKYFSPLE  
QSYVITKYAKDKKLAFEFNEFIGSSKAKEIFKKYGFSTP

SEQ ID NO:41

ACE 308 Cj0334

>AnrP505685 (NC\_002163) alkyl hydroperoxide reductase [C. jejuni]

MIVTKKALDFTAPAVLGNNEIVQDFNLYKNIGPKGAVVFFYPKDFTFVCPSEIIAFDKRYQEFKNRGIEV  
IGISGDNEFSHFAWKNTPVNQGGIGQVKFPLVADLTQKIARNFDVLYAEAVLRGSFLLDADGTVRHAVV  
NDLPLGRNIDEMLRMVDTMLFTNEHGEVCAGWNKGDEGMKANPKGVAEYLGKNEAKL

SEQ ID NO:42

ACE 388 Cj0415

>AnrP72219 (NC\_002163) putative oxidoreductase subunit [C. jejuni]

MAEVLKKVDVTVGAGWTGIVAAELTKAGLNVLSLGRHMQSTENFNHYHDEWRYGINYGLMQDCSKDT  
VTRHDPSPGLALPYRKMGSLGNNVGGAGVHWNGWTFRFPYDFEIQTLSKQRYGNKLGNDYTLQDWGV  
TYKDMPEYYDRFEKTCGVSGEFNPPLAEKMGAFRSPYPQEPLENTKMLKRFESAASSNLHTYRLPASNS  
KGGYTNPDGQDLAPCQYCAECERFGCEYGAKASPLNTVIPKAMSTGKYTIRTYSNVTQILKKDGKVTGVK  
FVDTRTMKEYIQPADIVVLTSYMFNNAKLLMVSNIQEYQDPKTGKGTGRNYCYQMMNGTTAFDFEQFNT  
FMGSGALGTTSDDFNGDNFDHSKEKFLHGAMIYSVQLGTRPIQSAPLPAGAPTWGAEFKKALNYNFTRAI  
TVGGQGASLPHKNYLSLDPTYKDAFGMPLRLTYNFTDQDRALHKFITDKTAEVAKRMQGVKSIKKGAY  
LKDYSVVPYQSTHNTGGTTMGADRETSVVNTYLQHWADNLFFVVGAGNFQHNSGYNPTDTVGALAYRCAE  
GILKYHKSGLSLA

SEQ ID NO:43

ACE 393 Cj0420

>AnrP490750 (NC\_002163) putative periplasmic protein [C. jejuni]

MKKVLLSSLVAVSLLSTGLFAKEYTLDKAHTDVGFKIKHLQISNVKGNFKDYSVIDFDPASAEFKKLDX<sub>1</sub>  
TIKIASVNTENQTRDNHLQDDFFKAKKYPDMFTMKKYEKIDNEKGKMTGTLTITAGVSKDIVLDX<sub>2</sub>EIGG  
VAKGKDGEKIGFSLNGKIKRSDFKFAX<sub>3</sub>STSTITLSDDINLNIEVEANEK

wherein X<sub>1</sub> is V or A, and X<sub>2</sub> is A or T, and X<sub>3</sub> is T or A

SEQ ID NO:44

ACE 711 Cj0759

>AnrP586832 (NC\_002163) heat shock protein dnaK [C. jejuni]

MSKVIIGIDLGTNSCVAVYERGESKVIPNKEGKNTTPSVVAFTDKGEVLVGDSAKRQAVTNPEKTIYSIK  
RIMGLMINEDAAKEAKNRLPYHITERNGACAIEIAGKIYTPQEISAKVLMKLKEDAEAFLEGESVTDVAIT



FIG. 4

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VPAYFNDAQRKATKEAGTIAGLNVLRINEPTSAALAYGLDKKDSEKIVVYDLGGGTFDVTVLETGDNVV  
 EVLATGGNAFLGGDDFDNKLIDFLANEFKDETGIDLKNVDMALQRLKEAAENAKKELSSANETEINLPFI  
 TADASGPKHLVKKLTRAKFEGMIDSLVAETITKINEVSDAGLKKDEIKEIVMVGGSTRVPLVQEEVKKA  
 FNKDLNKSVPDEVVAIGAAIQGAVIKGDVKDVLDDVTPLSLGIETLGGVMTKIEKGTITPTKKEQVF  
 STAEDNQSAVTINVLQGEREFSDNKSLSGNFNLEGIPAPRGMPQIEVTFDIDANGILTWSAKDKATGKA  
 QEIKITGSSSGLSEEEINNMVKDAELHKEEDKKRKEAVDARNAADSLAHQVEKSLSELGEKVAAADKENIQ  
 KALDDLRETLKNQNASKEEIESKMKALSEVSHKLAENMYKKDEPNTANDKKKKDDDDVIDAEVE

SEQ ID NO:45

ACE 723 Cj0771c

>AnrP524051 (NC\_002163) putative periplasmic protein [C. jejuni]  
 MNLFKIIILACILNLSSSLFAQNTITGATPNPFGSLLELMKDDFKNKGVELKIVEFSDYILPNRALEEKEL  
 DANLYQHKKPFLLEYNLKKGSNLIATTPVLIAPVGVYKIKNLENLKEGARVAIPNDATNESRALELEK  
 AKLIELNKNLTPLDINKNPKKLKFIELKAAQLPRALDDVDIAIINSNFALGAGLNPSKDTIFREDKNS  
 PYVNVVVRSEKGNSEKTKVIDEILRSDFKAIINEHYKDILIPAF

SEQ ID NO:46

ACE 724 Cj0772c

>AnrP579672 (NC\_002163) putative periplasmic protein [C. jejuni]  
 MKIKSLFIASITLSLNALETTVAATPVPHAILEQVKPDLEKQGYKLEIKEFTDYVLPNLAVDNGE  
 ADANFFQHTPYLEEFNKNKGTKLIKVAAIHIEPMAVYSKKYKSLDDIKEGVKIAIPNDPTNESRALDIIA  
 KKGLVKFKDKALKTPLDIIIDNPKKIKFVELKPAQLPRALNDVDFAVINSNYALSANLNPAKDSVFIEDKE  
 SPYANILVVRVGHENDPKIKALIQALQSDKIKQFIIKEYNGSVLPAPF

SEQ ID NO:47

ACE 819 Cj0872

>AnrP694298 (NC\_002163) putative protein disulphide isomerase  
 [C. jejuni]

MRNFFCKFVLALVFYSSFALANNSFITLNPSPSSSENSVIEAFSYKCIHCYNHHKFGTLEKLREAFPNLH  
 FKLVPVSLMNGEFSKEMNELFTFAQYKDEQNGKDASYSDSLSHKLADVYFVSYFLNKQRNFSNLDEFYDI  
 GLKAMNVNKNVNLNLTNTPKAKEILSEFORANDIAKTYGTPAFVVGNGKYQINPSAINSMQDLEDLVKKLS  
 NMK

SEQ ID NO:48

ACE 1060 Cj1118c

>AnrP515430 (NC\_002163) chemotaxis regulatory protein [C. jejuni]  
 MKLLVDDSSMTMRRIIKNTLTRLGHDDVLEAEHGVAEAWDLLTKNEDVKVLITDWNMPNMNGLELVKKVRA  
 EKKYEDMPIIMVTTEGGKAEVITALKAGVNNYIVKPFPTQVLKEKLEDVLGTGSGEGAAE

SEQ ID NO:49

ACE 1169 Cj1228c

>AnrP679791 (NC\_002163) serine protease (protease DO) [C. jejuni]  
 MKKIFLSLSLASALFAASINFNESTATANRVNPAAGNAVLSYHDSIKDAKKSVMNISTSKTITRANRPS  
 LDDFNDPYFKQFFDFDSQRKKGNDKEVSSLSGSGVVISKDGIVTNHVVDDADTITVNLPGSDIEYK  
 AKLIGKDPKTDLAVIKIEANNLSAITFTNSDDLMEGDVVFALGNPFGVGFVSVTSGIISALNKDNIGLNQY  
 ENFIQTASINPGNSGGALVDSRGYLVGINSAILSRGGGNGIGFAIPSNMVKDIAKKLIEKGKIDRGFL  
 GVTILALQGGDTKKAYKNQEGALITDVQKGSSADEAGLKRGLVTKVNDKVIKSPIDLKNYIGTLEIGQKI  
 SLSYERDGENKQASFILKGEKENPKGVQSDLIDGLSLRNLDPRDKRLQIPKDVNGVLVDVSVKEKSKGN  
 SGFQEGDIIIGVGQSEIKNLKDLEQALKQVNKKEFTKVWVYRNGFATLLVLK

SEQ ID NO:50

ACE 1510 Cj1584c

>AnrP355324 (NC\_002163) putative peptide ABC-transport system  
 periplasmic peptide- [C. jejuni]

MLRWVLLFLLFNLLEAKIPKDTLIIAVENETARINPAYSEDHDAVINLVFSGLTRFDENMSLKPDLAKS  
 WDISKDGLVYDIFLRDDVLWHDGVKFSADDVKFSIEAFKNPKNNSSIVNFEDIKSVEILNPESHVKITLF  
 KPYPAFLDALSIGMLPKHLENENLNTSSFNQNPIGTGPKYKFKWKKGGEYVEFKANEHPYLDKVKTPRLI  
 IKHIFDPSIASAELKNGKIDAALIDVSLNIFKNDENFGILREKSADYRALMFNLNDEFKDLKVRQALN  
 YAVDKESIVKNLLHDYAFVANHPLERSWANSKNFKIYKYDPKKAEDLLVSAGFKKNKDGNFEEKDGKILEF  
 EIWAMSNDPLRVSLAGILQSEFRKIGVSVKVVAKPAGSFDYSKVDLSFLIGWGSPLDPDFHTFRVFESSQD  
 SALNDEGWNFGHYHDKKVDIALQKARNTSNLEERKKYKDFIDALYENPPFIFLAYLDFALVYNKDLKGI  
 KTRTLGHGVGFTWNVYEWK

SEQ ID NO:51

ACE 1543 Cj1617

>AnrP111949 (NC\_002163) putative haemin uptake system periplasmic  
 haemin-binding protein [C. jejuni]

FIG. 4

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MKKILIIMSLFLIALNAKERLVVLDPASITLFLMLKAEDQIVGIATLQHSNIYPKDQTSKLTSGVTFNSP  
SLEKIVALKPSLVILSSYSNLNLEGLKNFGIKSINLKAERLEDITKNITTLGQITKKEKEAELLKQEFNQ  
KFKKLSDKPLNKSIAIYLYSSNPLMAFNDSNLIADILRLIGIKNLSPQSQISRPVISAEBYILKQNPDLIL  
GINAKNNLLDTNALLKNTKAVKTGSIYFNKDTPILLRLSPKIIDRIQEFKTKLENNNF

## Fragments of AnrP630851 (Cj0092)

SEQ ID NO:52: TQQDINTQNEMSDASTKDITPKSIEDFFFEFAD  
SEQ ID NO:53: GITKDGKTFYTGKSTVAVNDTDPQF  
SEQ ID NO:54: RIATSKIQNYEADNSTNAKEFDELPGGDKVDQILNK  
SEQ ID NO:55: QLDKALKDLGIDTNSLSEDRKKTLLKQEFNLKMTN  
SEQ ID NO:56: TIVTQRRGEYDVGVAVISNKTQLAKD  
SEQ ID NO:57: AISEYLPKDTKGFLNEYGIRLVYDEN  
SEQ ID NO:58: DPSNAKKTNILEDRAKET  
SEQ ID NO:59: LSLKDERTTGDYEEII  
SEQ ID NO:60: VNDSSSQEQTONITN  
SEQ ID NO:61: TLKKWSYTSENG  
SEQ ID NO:62: YSYENLANTNEALNSKSNATKNEAKKSSSIQRS

## Fragments of AnrP57234 (Cj0143c)

SEQ ID NO:63: IFYTFQAKNLEQEQTSSNLVSVS  
SEQ ID NO:64: LPPNSNEHNFEFKPSTMKKLEKSDIYF  
SEQ ID NO:65: LEFEKVFTDKFKQNF PKLQVINMQ  
SEQ ID NO:66: IQTHDTHEHSHEHEHHEGHFDPHTWL  
SEQ ID NO:67: DTLIQKYPQENLYKENLDK  
SEQ ID NO:68: SKLEKLKNRE  
SEQ ID NO:69: YFAKRYNL  
SEQ ID NO:70: GKEPKSKDLQK  
SEQ ID NO:71: LMKDKNLK  
SEQ ID NO:72: QNGFPENAAKTLAKECDAKIYK  
SEQ ID NO:73: DHLSDWENELLKTADAF

## Fragments of AnrP490750 (Cj0420)

SEQ ID NO:74: FAKEYTLDKAHTDVGFKIKHLQI  
SEQ ID NO:75: VKGNFKDYSAVIDFDPASAEFKKLDVTI  
SEQ ID NO:76: SVNTENQTRDNHLQQDDFF  
SEQ ID NO:77: DFFKAKKYPDMTFTM  
SEQ ID NO:78: TFTMKKYEKIDNEKGKMT  
SEQ ID NO:79: GVAKGKDGKEKIGF  
SEQ ID NO:80: LNGKIKRSDFKFATS  
SEQ ID NO:81: EVEANEK

## Fragments of AnrP684299 (Cj0715)

SEQ ID NO:82: LSATEYQLSTHV  
SEQ ID NO:83: ITSGQPAPKVVKVELYK  
SEQ ID NO:84: LEANQQWKKVSEEFTEENGRIG  
SEQ ID NO:85: LLPYEKAENRAFG  
SEQ ID NO:86: KFFT KDYYTSHKINTF  
SEQ ID NO:87: SFELSKDQKHVPI  
SEQ ID NO:88: FGYSTYRGS

## Fragments of AnrP579672 (Cj0772c)

SEQ ID NO:89: ILEQVKPDLEKQGYKLEIKEFTDY  
SEQ ID NO:90: GEADANFFQHTPYLEEFNKNKGT  
SEQ ID NO:91: AVYSKKYKSLDDIKE  
SEQ ID NO:92: IPNDPTNESRAL  
SEQ ID NO:93: KGLVKFKDKALKTPLDIIDNPKKIKFVELKPAQLPRALN  
SEQ ID NO:94: ANLNPAKDSVFIEDKESPYAN  
SEQ ID NO:95: GHENDPKIKALIQALQSDKIKQFIIEKYN

## Fragments of AnrP257863 (Cj1018c)

SEQ ID NO:96: NGDKVSLAIIDTKGDKLESSSGANRLVSQDK  
SEQ ID NO:97: VAEDNKIPLIAPAATGDRLLDKKIYSSRVC  
SEQ ID NO:98: YVFSKLNYSKSAVIVDQSTDYSLGLAKAFEKQYKSNGGQ  
SEQ ID NO:99: NSGDKDFRAIVAQVKSINPEFIFLPLYSEASLFARQSKLA  
SEQ ID NO:100: GYIFTDSFDANNPTTKLSKEFISVYEKAKGTKEVPNFSAMG

FIG. 4

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SEQ ID NO:101: VNEKIHQTKNYQGV

SEQ ID NO:102: QTGNATRSVVVKEIKNQKQNYKDIIN

Fragments of AnrP108083 (Cj1380)

SEQ ID NO:103: ELNGQKQENILFTK

SEQ ID NO:104: SYAQEYEMKKFQEAARENFTKNAKAVAQKETM

SEQ ID NO:105: VIALGDKNKPAI

SEQ ID NO:106: HLAQIDDELKQYQV

SEQ ID NO:107: YKEAKKAKNDKEKIAI

SEQ ID NO:108: LNKYYDANIKNYPKVSDAELKEVFSLEYEKYRSL

Fragments of AnrP407676 (Cj1643)

SEQ ID NO:109: GIERPKFEDFLAGYERNKASMLN

SEQ ID NO:110: LKQPNAKLNKYVKYDPFL

SEQ ID NO:111: PTPMGDEEKLTRNDWVGWDPNKPPI

SEQ ID NO:112: AQNIDEKDQLDFNSK

SEQ ID NO:113: GNRYLKHFMYNDVY

SEQ ID NO:114: VVRENKIYVNNVRKNPQFL

SEQ ID NO:115: PANDLRKLNEK

SEQ ID NO:116: DRGSTLYPQVLRDNMDLN

SEQ ID NO:117: AKDLSKFNLPSKPKPKI

SEQ ID NO:118: TKIDPKSKVSNAG

SEQ ID NO:119: LIERKSTKLPLSNFN

SEQ ID NO:120:

ACE 393, ML53 (0:19)DNA

ATGAAAAAGTTTTATTGAGTTCATTGGTTGCGGTGTCCTTTGTTAAGCACAGGTTTGGTTGCTAAAGAATATACTTTAGA  
TAAAGCACATACAGATGTAGGTTTTAAAATCAAACATTTACAAATTAGCAATGTAAAAGGAAATTTCAAAGATTATTCTG  
CGGTGATTGATTTTGACCCGTGCGAGTGCTGAATTTAAAAAGCTTGATGCAACTATAAAAAATCGCATCTGTAAATACAGAA  
AATCAAACAAGAGATAATCACTTACAGCAAGATGATTTTTTCAAAGCAAAAAAATATCCTGATATGACTTTTACAATGAA  
AAAATATGAAAAAATCGATAATGAAAAAGGTAAAATGACAGGAACTTTAACTATAGCTGGAGTTTCTAAAGATATCGTTT  
TAGATACTGAAATCGGCGGTGTAGCTAAAGGCAAGATGGAAAAGAAAAAATAGGCTTTTCTTTAAATGGAAAAATCAAA  
CGCTCTGATTTTAAATTTGCAGCAAGTACTTCAACTATTACTTTAAGTGATGATATTAATTTAAATATCGAAGTTGAAGC  
GAACGAAAAA

SEQ ID NO:121: DIVLDTEIGGVAK

SEQ ID NO:122: FAASTSTITLSDDINLNIEVEANEK

SEQ ID NO:123: LDATIK

### Table 1

[illegible]